

REMARKS

In reply to the Office Action mailed on January 14, 2004, Applicants have amended claim 6, withdrawn claims 8-17, and added new claim 18. Claims 1-7 and 18 are presented for examination. Please consider the following remarks.

All of the pending claims recite a lithium electrochemical cell. The cell has an electrolyte including a mixture of solvents that includes propylene carbonate and dimethoxyethane, and a salt mixture that includes lithium trifluoromethanesulfonate and lithium trifluoromethanesulfonimide. The cell contains less than 1500 ppm by weight of sodium.

Claims 1-5 are rejected under 35 U.S.C. § 102(e) as anticipated by each of U.S. Patent Publication No. 2002/0113622 to Blasi *et al.* ("Blasi"), U.S. Patent Publication No. 2003/0186110 to Sloop ("Sloop"), and U.S. Patent No. 5,554,462 to Flandrois *et al.* ("Flandrois"). The Examiner apparently acknowledges that none of Blasi, Sloop or Flandrois expressly teaches or suggests a lithium electrochemical cell containing less than 1500 ppm by weight of sodium, as claimed.

Instead, the Examiner asserts that the cited references inherently anticipate claims 1-5. In each rejection, the Examiner asserts that in the absence of any electrochemical cell component or feature derived from or containing sodium, the electrochemical cell must exhibit zero content of sodium. Accordingly, the Examiner asserts that a zero content of sodium is an inherent characteristic of the cell if both the active materials, as well as suitable salts, are selected from any material except sodium. (See Office Action, pages 4 and 5.) But to rely upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. (See M.P.E.P. § 2112, citing *Ex parte Levy*, 17 USPQ2s 1461, 1464 (1990).)

Here, a cell having a zero sodium content does not necessarily flow from a cell made from active materials or salts that are selected from materials other than sodium. Rather, sodium can be introduced into a cell, e.g., as a trace element, in a variety of ways. As explained in Applicants' specification (paragraph 0024), sodium can be introduced during

manufacture and washing of the cell. Sodium can also be introduced into a cell where electrolytic manganese dioxide (EMD) is used in a cathode that is subsequently washed or neutralized with a sodium-containing agent. Additionally, cell components such as an anode and a separator can include sodium, for example, unless specified to be free of sodium.

None of the cited references teach or suggest controlling the introduction of sodium into a cell. For example, none of the references describes a manufacturing process that produces a cell having a sodium content of less than 1500 ppm by weight, the use of washing or neutralizing agents free of sodium, or the use of cell components substantially free of sodium. Accordingly, it cannot be maintained that a cell having a sodium content of less than 1500 ppm by weight necessarily flows from the disclosures of the cited references. In view of the foregoing, Applicants request reconsideration and withdrawal of these rejections.

Claims 6-7 are rejected under 35 U.S.C. § 102(e) as anticipated by one or both of Sloop and Flandrois. In addition to the features discussed above, claim 6 recites a mixture of solvents including 40-80% by weight of dimethoxyethane and 20-60% by weight of propylene carbonate. Additionally, the salt mixture has a concentration between 0.4 and 1.2 M in the mixture of solvents. Claim 7 further recites a mixture of solvents including 50-75% by weight of dimethoxyethane and 25-50% by weight of propylene carbonate.

The Examiner asserts that Sloop discloses a 1:1 ratio equivalent of solvents (i.e., 50% by weight of each solvent) in SECTION 0026. Sloop does not disclose a 1:1 ratio equivalent of the solvents dimethoxyethane and propylene carbonate, as claimed. Instead, Sloop discloses a 1:1 ratio of ethylene carbonate and diethyl carbonate. (See, e.g., Sloop paragraph 0026.) Accordingly, Sloop does not anticipate claim 6 or 7 and the corresponding rejection should be withdrawn.

The Examiner asserts that Flandrois discloses an example of a cell including an electrolyte composed of an organic solvent with a mixture of 20% by volume of propylene carbonate and also containing dimethoxyethane where the lithium salt was dissolved at a concentration of 1 mole/liter (1.0M). The only examples disclosed in Flandrois that describe an electrochemical solvent are Examples 1 and 9. Neither of these examples discloses a mixture of

40-80% by weight of dimethoxyethane and 20-60% by weight of propylene carbonate as recited in claim 6. Instead, Example 1 discloses a solvent of equal volume ethylene carbonate and dimethyl carbonate (See, e.g., Col. 6, lines 14-20), and Example 9 discloses a solvent of 20% by volume of ethylene carbonate, 20% by volume of propylene carbonate, and 60% dimethyl carbonate (See, e.g., Col. 10, lines 14-20). Because Flandrois does not disclose a mixture of 40-80% by weight of dimethoxyethane and 20-60% by weight of propylene carbonate as recited in claim 6, Flandrois does not anticipate claim 6 and the rejection should be withdrawn.

Applicants submit herewith a petition for the extension of time along with a check for the requisite fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: _____

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